

ADA* for Roads & Bridges

Incorporating PROWAG**

* Americans with Disabilities Act

** Public Rights of Way Accessibility Guidelines



Transportation Accessibility - LAP:

Responsibilities of Local Agencies Under the ADA to Provide Accessible Services and Programs, Including the Design and Construction of Sidewalks, Curb Ramps, Detectable Warnings, Crossings and Other Pedestrian Facilities within Public Rights of Way



Dean Perkins, Architect, ADA Coordinator

Introduction

- Brief overview of Title-VI, 504 & ADA
- How ADA impacts local agencies
- Features of Accessibility
- New Concepts
- Examples of roadway elements
 - Random images
 - Some good; some not so good
- How you can comply

◦ Title VI & Nondiscrimination At a Glance

The ADA did not occur in a vacuum, but as a part of a series of laws designed to protect people in the US based on immutable characteristics

Cars come in different colors, shapes, sizes, models and are made in different countries



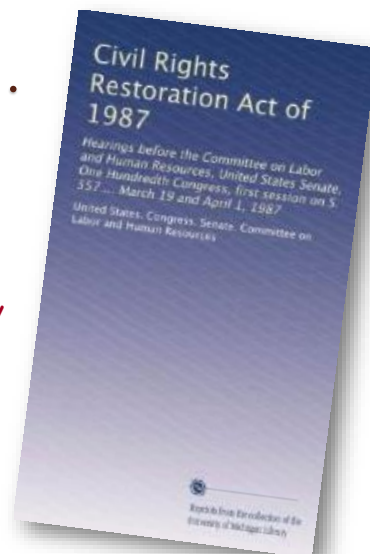
Just like people, Title VI requires that Federal-aid recipients ensure they aren't discriminating against, excluding from participation in or denying benefits to anyone based on race, color or national origin.

Other Federal and State
authorities extend protection:

Gender or Sex
AGE
Disability **Religion**
Family status

Thanks to the . . .

Title VI nondiscrimination
applies to all programs and
services of a recipient,
whether or not that activity
receives federal funds



Fed Aid Recipients also have affirmative action responsibilities

Here are a few:

- Limited English Proficiency (LEP)
- Environmental Justice
- Small and Disadvantaged Business contracting
- Public Involvement
- Reasonable Accommodation

DOJ Enforces Federal Civil Rights Laws

1. All federal agencies must ensure their recipients and sub-recipients comply with nondiscrimination laws.
2. For FHWA, Title VI/ADA regulatory authority is at 23 CFR 200, 49 CFR 21/27, 28 CFR 35.105, et al.
3. Recipients must review each of their program areas annually for compliance.
4. Failure to comply can result in deficiency findings and, if not corrected, loss of funding.

Background of the ADA

- ADA - Civil Rights Law
 - 1964 - 1990 Federal Laws
 - 1964 Civil Rights Act
 - 1968 Architectural Barriers Act (federal buildings)
 - 1973 Rehabilitation Act (s. 504 - federal programs)
 - 1987 Civil Rights Reauthorization Act



Background of the ADA

- 1990 Americans with Disabilities Act
 - July 26, 1990 - signed
 - January 26, 1992 - effective date
 - July 1, 1994 - Revised ADA Standards.
 - July 26, 2004 - new ADA guidelines (ADA/ABA)
 - Nov 23, 2005 - new PROW guidelines (PROWAG)
 - **Nov 26, 2006 - FHWA adopts ADA Standards for Transportation Facilities (ADASTF)**
 - **July 23, 2011 - Access Board issues NPRM for PROWAG**



Statutory language

Section 504:

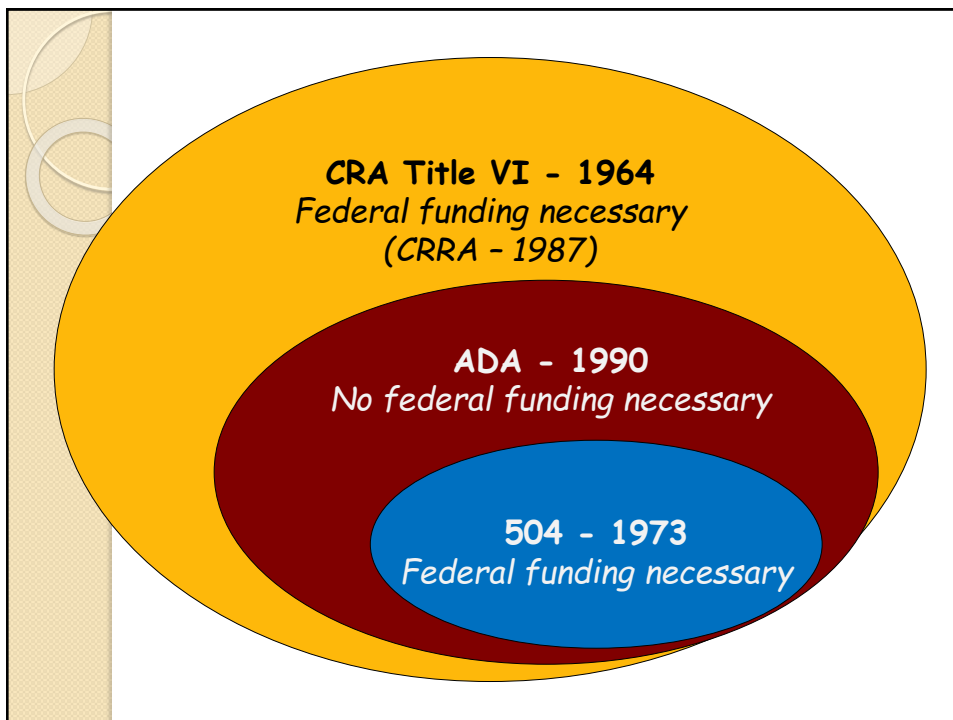
"No otherwise qualified individual with a disability in the United States . . . Shall solely by reason of her or his disability, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial Assistance."

29 USC § 794 (a) (1973)

ADA:

" . . . no qualified individual with a disability shall, by reason of such disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of a public entity, or be subjected to discrimination by any such entity."

42 USC § 12132 (1990)



ADA Requirements

- 5 Titles under the ADA
- Under Title II...
- All state and local agencies must:
 - Issue a policy statement describing intent to comply with 504 and ADA.
 - NOTE: *This may part of a Title VI policy*

Title II Regulations - 28 CFR 35.106

ADA Requirements

- In addition...
- State and local agencies with 50 or more employees must:
 - Have an accessibility Complaint Process
 - Designate an ADA coordinator and publish their contact information, and
 - Conduct Self-Evaluations and develop Transition Plans . . .

Title II Regulations - 28 CFR 35.105 & 35.107

ADA Policy & Grievance Procedure



Self-Evaluations

- **You must:**
 - Review Policies and Procedures, etc. for obstacles that limit access for persons with disabilities.
 - Revise policies and procedures as appropriate to remove discriminatory language, practices that may limit ability of persons with disabilities to participate in programs, services or activities.
- **You must also:**
 - Provide opportunity for interested persons and groups to participate in self-evaluation(s) leading to transition plan(s).
 - Make self-evaluations available for public inspection.

Transition Plans

- **You must:**
 - Identify physical obstacles that limit access of persons with disabilities to public programs, services, activities or facilities, etc.
 - Describe in detail methods to be used to correct deficiencies.
 - Specify schedule for improving facilities by prioritizing needs of persons with disabilities in existing facilities.
 - Indicate official responsible for implementation of plan.
- **You must also:**
 - Provide opportunity for interested persons and groups to participate in transition plan process.
 - Make transition plans available for public inspection.

The Future of Facilities within Public Rights of Way(?)

USDOT / FHWA recommends using **PROWAG** criteria where **ADASTF** do not address an issue.

RECOMMENDATION:

Start learning **PROWAG!**

www.access-board.gov/prowac/nprm.htm



Transportation.....



ADA and Sidewalks

- ADA is a federal civil rights law
 - Enacted July 1990 - Effective January 1992
 - **Title II - Public Services** (of 5 Titles)
 - ADA: 'Public services' must be accessible
 - ADA: Public sidewalks along roadways *ARE* public services
 - ADA: Public sidewalks are public access routes
 - Curb ramps are part of public access route
 - Features along sidewalks must be accessible

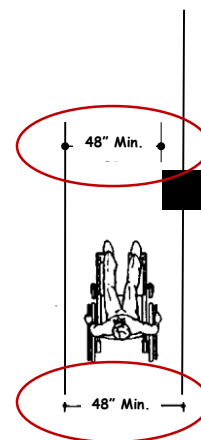
Roadside Accessibility

- Accessible Route Requirements
(*PROWAG - Pedestrian Access Route*)
 - Widths
 - Running slopes
 - Cross Slopes
 - Surfaces
 - Changes in Level
 - Gaps / Grates
 - Protruding Objects
 - Signs & Equipment
 - Landscape Materials

Accessible Route (AR) & Pedestrian Access Route (PAR)

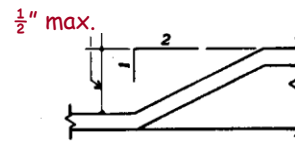
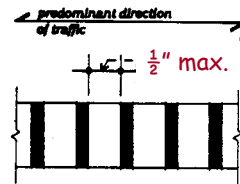
- AR = 36" continuous unobstructed path
 - *PAR = 48" (FDOT Stds. & PROWAG)*
 - *NOTE: Also "Florida Greenbook" (6/19/17)*
- AR = 32" min. at a 'point' (24" max.)
 - *PAR = 48" (FDOT Stds. & PROWAG)*
 - *NOTE: Also "Florida Greenbook"*
- 60" x 60" passing space @ 200'
- Slopes:
 - $\leq 1:20$ ($\leq 5\%$) is not a ramp
 - $> 1:20$ ($> 5\%$) is a ramp
 - 1:12 (8.33%) max. allowed *
- Cross-slope
 - 1:50 (2%) max. allowed *
 - 1:75 (1.5%) preferred

* *Exceptions in PROWAG*



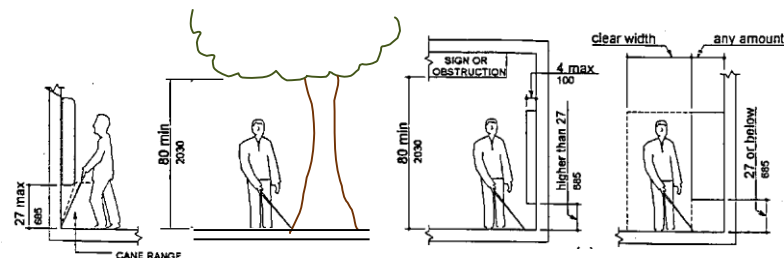
Surfaces

- Firm, stable, slip-resistant
 - Dry or wet!
- Changes in level
 - $\leq \frac{1}{4}$ " - Vertical
 - $> \frac{1}{4}$ " $\leq \frac{1}{2}$ " - 1:2 slope
 - $> \frac{1}{2}$ " - 1:12 slope (ramp)
- Gratings & Joints
 - $\frac{1}{2}$ " max. gap (!!!)



Protruding Objects

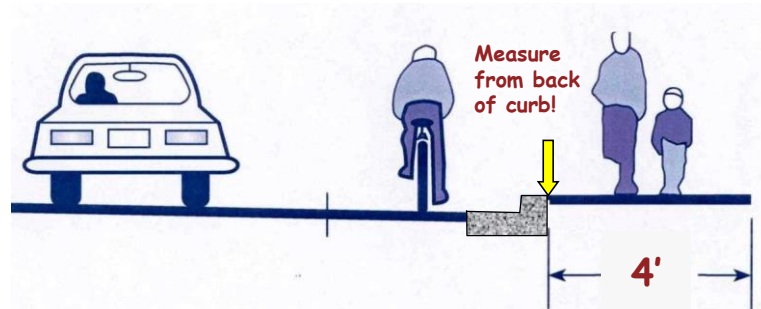
- 27" - 80" range above grade
- Post-mounted (≤ 12 " offset) (≤ 4 " in PROWAG)
- Wall mounted (≤ 4 " offset)
- Overhanging (≤ 80 " above grade)



Pedestrian Access Route (PAR)

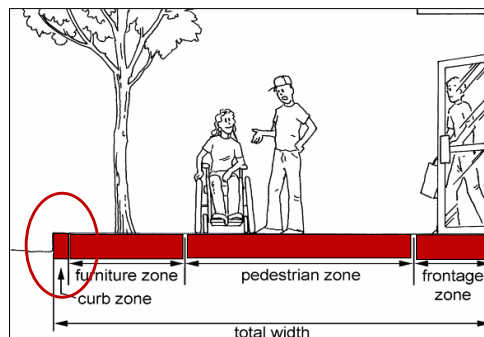
R302.3 Continuous Width

- The minimum continuous and unobstructed clear width of a pedestrian access route shall be 4 ft., exclusive of the width of the curb



The Sidewalk 'Zone' System

- Curb Zone
- Furniture Zone
- Pedestrian Zone (PAR)
- Frontage Zone



Zone System: Residential



Zone System: Commercial



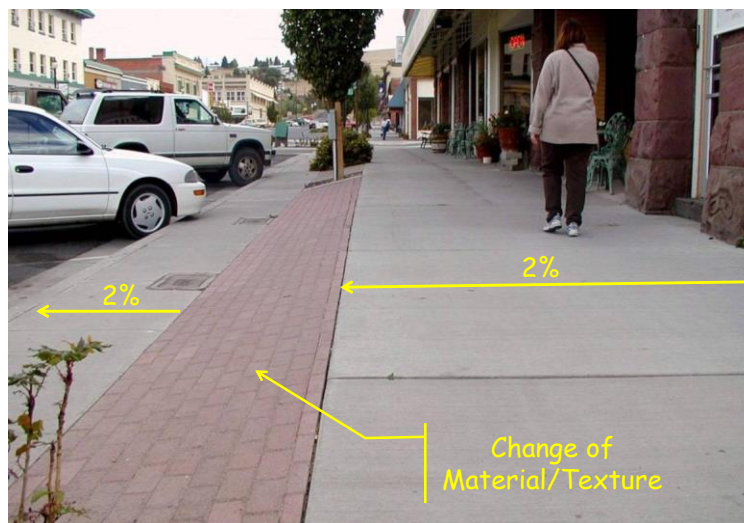
Furniture Zone

Carefully arranged street furniture leaves the sidewalk clear



Randomly arranged street furniture clutters the sidewalk and creates an 'obstacle course'

A Cross Slope Solution



Another...



A difference between AR & PAR!

For sidewalks within the public right of way . . .

Sidewalk grade - **ADASTF** vs. **PROWAG**

- **ADASTF:** Provide accessible route (AR)
- **PROWAG:** Match roadway grade (PAR)

ADASTF



PROWAG



Ramps - "supported slopes" i.e., Bridges

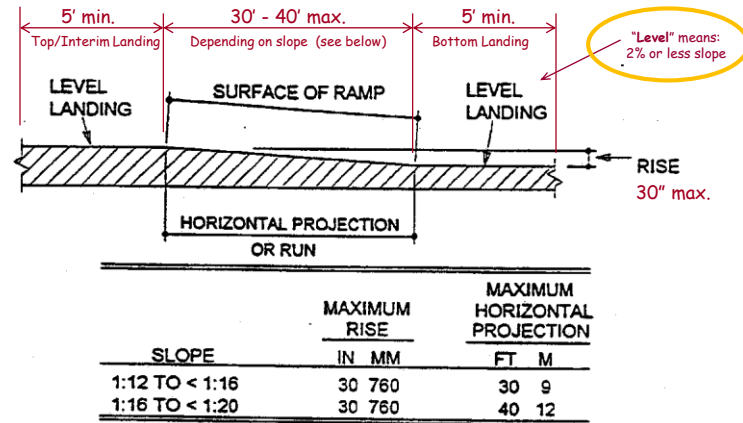
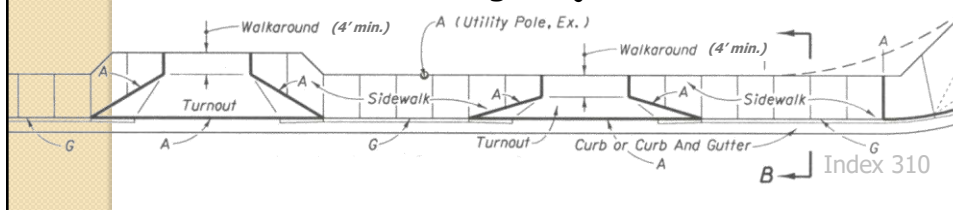


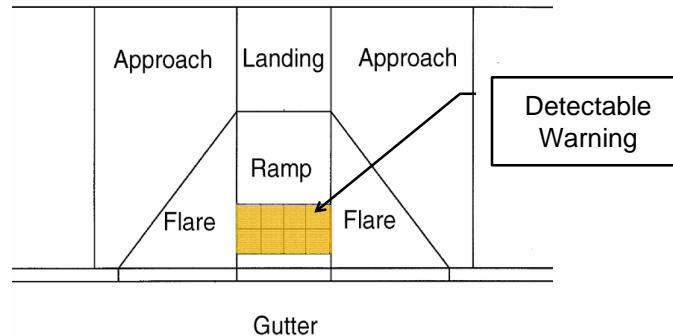
Fig 16
Components of a Single Ramp Run and Sample Ramp Dimensions

Sidewalks

- Are Pedestrian Access Routes (PAR)
 - 48" min. width
 - FDOT Design Standards - Index 310
 - PROWAG - Section R302
- Cross-slopes - 1:48 / 2% max.
- Check Surfaces - "Firm, Stable, Slip-resistant"
- Look for Level changes - $\frac{1}{4}$ " / $\frac{1}{2}$ "
- Look for Protruding Objects - 27"-80"

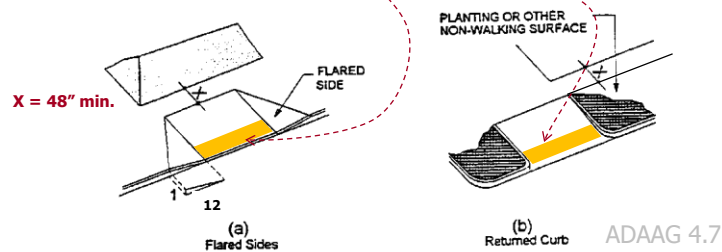


Curb Ramps R207 & R304



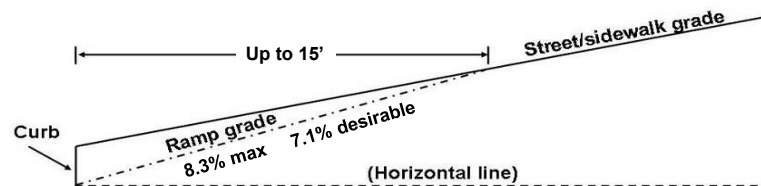
Curb Ramps

- Running Slopes (1:12 / 8.3% max.)
- Cross-slopes (1:48 / 2% max.)
- Landing at top (48" min.)
- Detectable Warnings



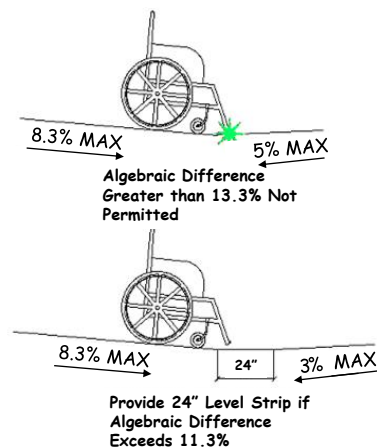
Curb Ramp Grade R304

- Least slope possible is preferred
- Recommended maximum grade to allow for construction tolerance - 7.1%
- Maximum grade - 8.3%
- Exception: when "chasing grade," ramp length need not exceed 15', but slope must be uniform



Change of Grade (Counterslope) R303.3.5

- PROWAG allows 8.3% ramp and 5% grade at the adjacent street = 13.3%
- Recommendation:
 - 11.3% maximum
 - Provide 2' level area if greater than 11.3%



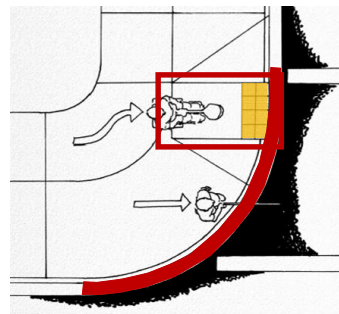
See notes in Index 304

Transportation.....



Curb Ramps and Detectable Warnings

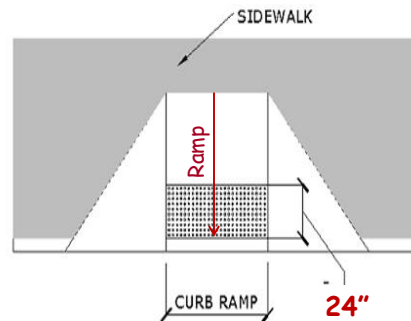
- Curbs are an 'edge cue' for pedestrians who are blind or have low vision
- Curbs are a barrier for persons in wheelchairs
- Curb ramps remove the barrier for wheelchairs
- Curb ramps remove edge cue for peds with vision impairments
- Detectable warnings are a replacement cue to indicate location of the street



Perpendicular Curb Ramps

R305.2.1

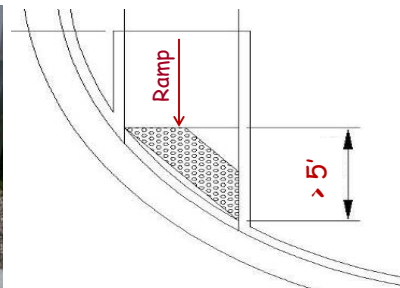
- Perpendicular Curb Ramp
 - Place DW at back of curb or at grade break



Directional/Linear Ramps

R305.2.1

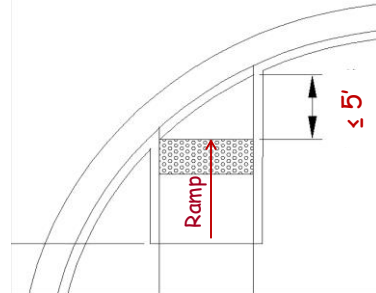
- Greater than 5 feet setback . . .
 - Place DW on bottom landing if level landing is more than 5' deep at any point



Directional/Linear Ramps

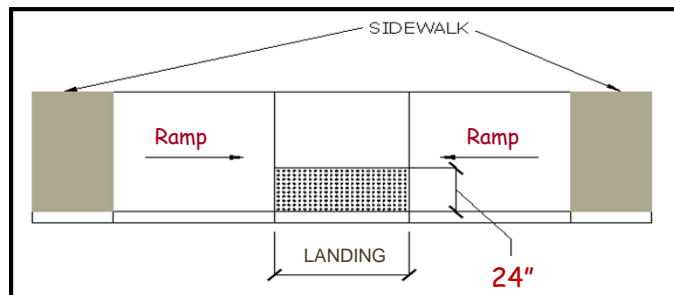
R305.2.1

- Equal to or less than 5 feet setback from bottom of curb ramp . . .
 - Place DW at grade break if level landing at bottom of ramp is 5' deep or less



Parallel Ramps

R305.2.2



Blended Transitions

R305.2.3 - "Full Width!"



Detectable warning = 'Stop sign'

- Delineates the edge of the street
 - Does not designate the best crossing location for a pedestrian who is blind or has low vision
 - Does not provide alignment information

Detectable Warning Alignment

To align or not to align . . .

- Detectable warnings 'warn' of roadway edge
- DW alignment *NOT* used as directional cue
 - Other methods: traffic sounds, APSs, etc.
- In a perfect world, all detectable warnings would be aligned with crossing
 - Easier to construct
 - Easier to use
- However . . .
 - Not all curb ramp configurations and site conditions permit DW alignment

Detectable Warning Alignment

To align or not to align . . .

- So...
 - Dome alignment is desirable, *but not required*



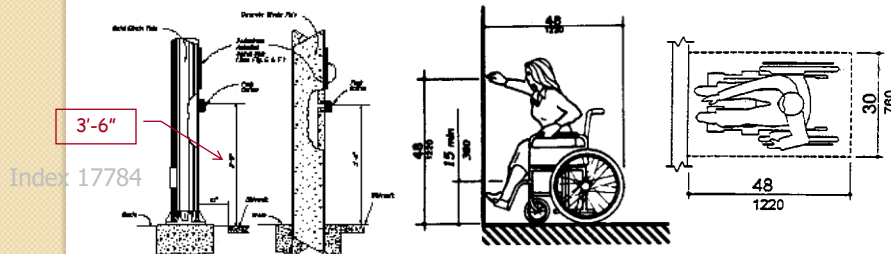
Perfect World



Real World

Pedestrian Controls R306 & MUTCD 4E.06

- In reach ranges (48" max.)
 - **42" FDOT Standard**
 - 10" max. reach - over obstruction/edge of sidewalk
 - 2" dia. raised buttons
- Maneuvering space (30" x 48" min., level)

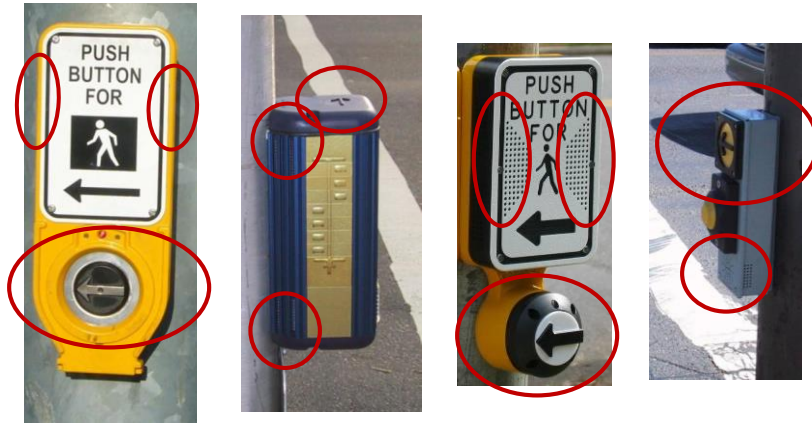


Accessible Pedestrian Signals MUTCD 4E-09

- For pedestrians with vision impairments
- Used in conjunction with pedestrian signal timing
- Add "non-visual" information:
 - Tactile features
 - Audible tones
 - Vibrating surfaces
 - Speech messages
- Must indicate which crossing is served by each device



Accessible Pedestrian Signals

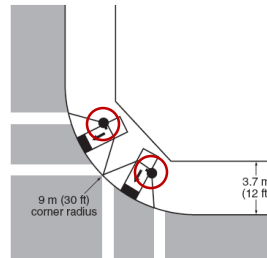


Speakers

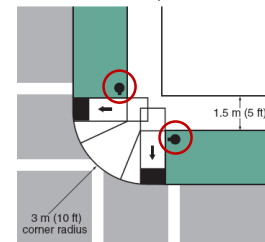
Tactile Arrow

Pushbutton Locations R403 & MUTCD 4E

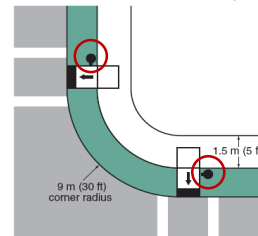
E - Perpendicular ramps with crosswalks close together



I - Perpendicular ramps with sidewalk set back from road with continuous sidewalk between ramps



F - Perpendicular ramps with sidewalk set back from road with crosswalks far apart



- NOTE: It must be clear which button controls which crossing. (per MUTCD).
- If APSs cannot be placed at least 10' apart, they must 'speak' to you.

APS Location



Good placement of APSs



Not-so-good placement

Pedestrian Crossings R306



- Slope of crossing = cross-slope of roadway
- Cross-slope of crossing = grade of roadway
- Cross Slope of crossing:
 - 'STOP'-'YIELD'-controlled: 2% max.
 - Non-'STOP'-controlled: 5% max.
 - i.e., **signal** or no control
 - Mid-block: Match grade of roadway





This is who we are working for



Strobe lights

Push button

RRFB

Rectangular Rapidly
Flashing Beacon



RRFB

Upon activation of push button...

HAWK Pedestrian Hybrid Beacon

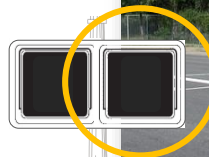
- Stays dark for vehicles and solid 'hand' for pedestrians until activated, then:

- **For vehicles:**

1. Flashing **Yellow** light,
2. Solid **Yellow** light,
3. Solid **Red** lights
4. Alternating **Red** lights,
5. Then dark

- **For pedestrians:**

1. Solid **Hand**,
2. Solid **Hand**,
3. Solid **Walk**,
4. Flashing **Hand**
5. Solid **Hand**



Bus Stops R308



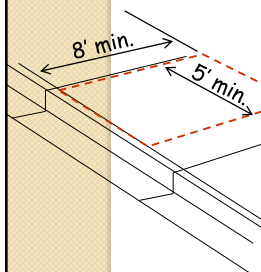
- When siting a new bus stop...
 - Must be on PAR
 - 48" min.
 - 60" recommended
 - This may be sidewalk or paved shoulder
 - Must have accessible approach to bus stop
 - 48" min. width - 60" recommended
 - Leads to / part of boarding & alighting area
 - Meets running slope/cross slope criteria
 - Firm, stable & slip-resistant
 - Must consider potential construction of boarding and alighting area & other features

Bus Stops

- **If provided - Boarding & Alighting area:**

- Place for bus lift/ramp to deploy
- "Firm, stable and slip-resistant" surface (ADAS & PROWAG)
- "Firm and stable" surface (ADASTF)
- Must connect to streets, sidewalks, etc.
 - Sidewalk, curb ramps, etc.
- 5' min. width - parallel to roadway
- 8' min. depth - perpendicular to roadway

5' x 8' B&A area

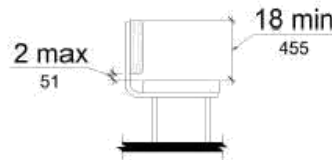


NOTE: If low-floor, ramp-equipped bus is used, the B&A area should be raised (curb height).

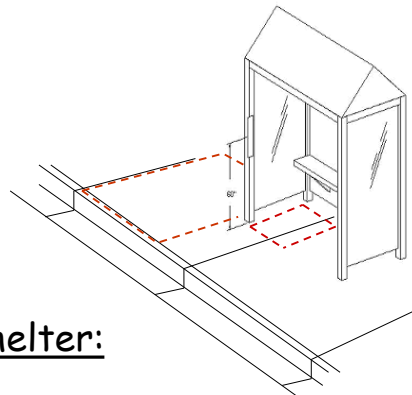
Bus Stops

- **If provided - bus bench:**

- Must be on PAR
- Must not block PAR
 - 48" min. clearance - 60" recommended
- Must have maneuvering space adjacent to bench
 - 30" x 48" min.; firm, stable & slip-resistant surface
 - Allow shoulder-to-shoulder seating for companion
- Allow transfer to bench (if desired)
 - Seat length: 42" min.
 - Seat height: 17"-19"
 - Seat back: 2"-18" above seat
 - Armrest recommended



Bus Stops



- **If provided - bus shelter:**

- Must be on PAR
- Must not block PAR
 - 48" min. clearance - 60" recommended
- 30" x 48" min. clear floor area within shelter
- 48" min. approach to clear floor area
- 48" min. approach to boarding & alighting area

Rural bus stops

- Primary Issues:
 - Flush shoulder - No curb
 - Shoulder is sloped away from the roadway
 - Most 'kneeling' buses are designed to deploy front ramps onto 6" high curbs
 - Up to 1:4 slope allowed on bus ramp deployed onto curb (ADAASTV, 49 CFR 38.23(c)(5))*
 - Use on flush shoulder causes ramp to be too steep for safe use.

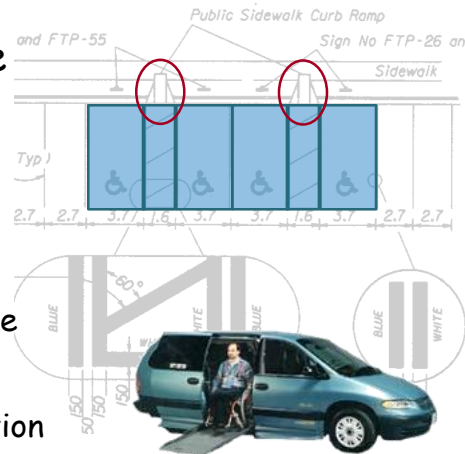
** ADAASTV = ADA Accessibility Specifications for Transportation Vehicles*

Rural bus stops



Parking

- Accessible space
 - Width = 12'-0" min.
- Access aisle
 - Width = 5'-0" min.
- Curb ramp
 - Outside space & aisle
- Slopes
 - 1:50 max. any direction



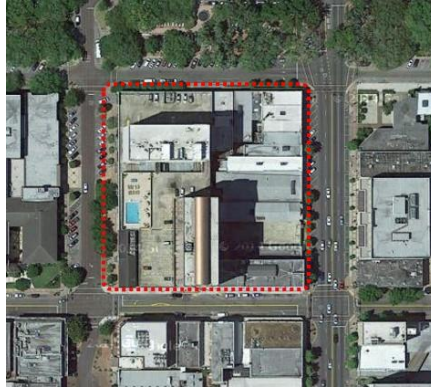
Index 17346

On-Street Parking Spaces R214 & R309

- Accessible on-street parking space per block perimeter - approx. 4% of total
 - Table R214
- Parking spaces are best located where the street has the least crown & grade and close to key destinations (i.e., near crosswalks)

On-Street Parking Spaces R214 & R309

- Accessible on-street parking space per block perimeter - approx. 4% of total



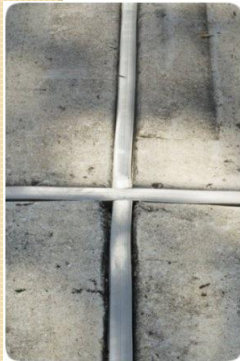
Maintenance of PAR 28 CFR 35.133

- Title II of the ADA requires public entities to maintain equipment and features of facilities that are required to provide ready access to individuals with disabilities



Potential Solutions

- Sidewalk Grinding
- Flexible Pavement
- Joint Materials

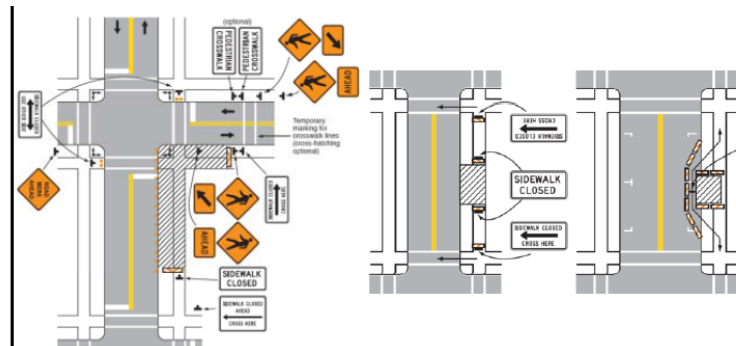


Alternate Pedestrian Routes R205 & R303 & MUTCD 6D & 6G

- Alternate Pedestrian Access Routes are required when an existing pedestrian access route is blocked by construction, alteration, maintenance, or other temporary condition.



Alternate PARs



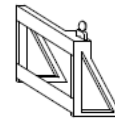
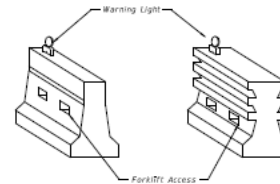
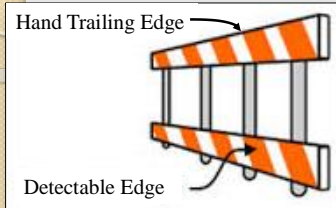
References Part 6 of the MUTCD

See similar requirements in FDOT Index 660

Alternate PARs

- R205 specifies that the alternate pedestrian access route shall be:
 - Provided on the same side of the street as the disrupted route, to the maximum extent feasible
 - Where exposed to adjacent construction, traffic or other hazards, shall be protected with a pedestrian barricade or channelization device
 - Continuous, stable, non-flexible
 - Consist of features identified in the *MUTCD* Chapter 6F
 - *Plastic tape is not acceptable!!!*
 - *Rows of barrels and/or cones is not acceptable... unless they are connected by a continuous 'detectable' edge*

Longitudinal Channelizing Devices (LCDs)



LONGITUDINAL CHANNELIZING DEVICE

12. For pedestrian longitudinal channelizing devices, the device shall have a minimum of 8" continuous detectable edging above the walkway. A gap not exceeding a height of 2" is allowed to facilitate drainage. The top surface of the device shall be a minimum height of 32" and have smooth connection points between the devices to facilitate hand trailing. The bottom and the top surface of the device shall in the same vertical plane. If pedestrian drop-off protection is required, the device shall have a footprint or offset of at least 2', otherwise the device must be 42" in height above the walkway and be anchored or ballasted to withstand a 200 lb. later point load at the top of the device.

FDOT Design Standards -Index 600

Examples of LCDs



Construction Work Zones

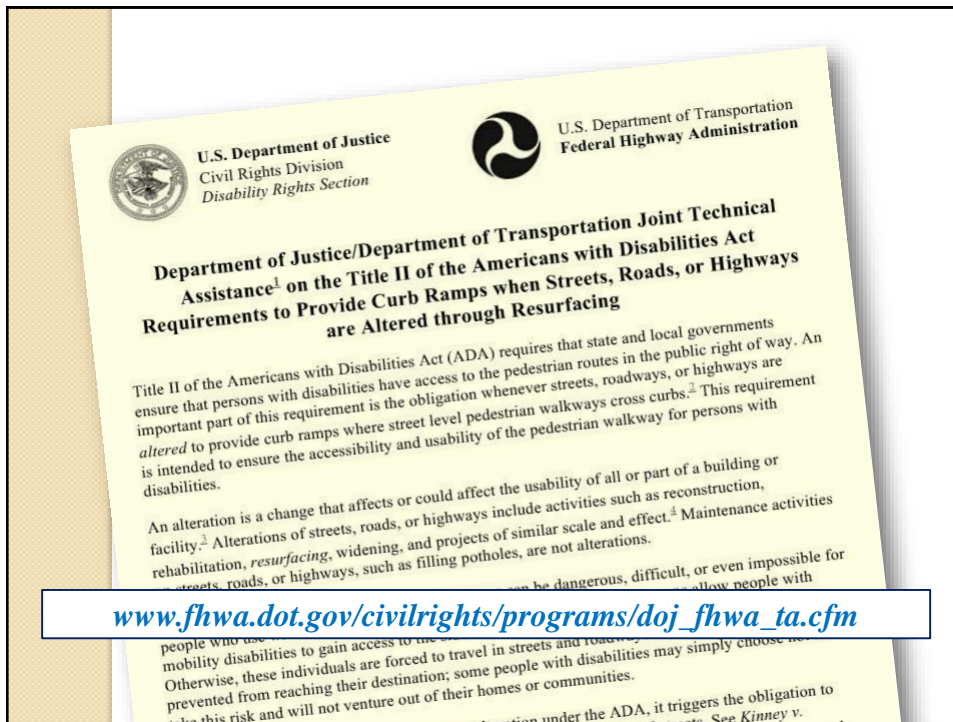
- Unfortunately, too many bad examples...



Latest from DOJ & DOT!

- Resurfacing and Curb Ramps
- Clarification of existing regulations:
 - 28 CFR 35.151, "alterations require the inclusion of accessible features"
- New "Joint Technical Assistance"
 - What is an 'alteration', and
 - What is 'maintenance'

Please Note: These are not new requirements, but, clarification of current requirements.



Where Curb Ramps are Required?

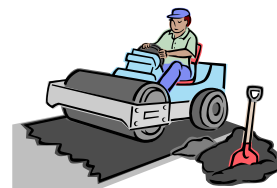
- Generally, curb ramps are needed wherever a sidewalk or other pedestrian walkway crosses a curb.
- Curb ramps must be located to ensure a person with a mobility disability can travel from a sidewalk on one side of the street, over or through any curbs or traffic islands, to the sidewalk on the other side of the street.

Where Curb Ramps are NOT Required?

- ADA does not require installation of ramps or curb ramps in the absence of a pedestrian walkway with a prepared surface for pedestrian use.
 - *(i.e., Where there are no sidewalks)*
- Nor are curb ramps required in the absence of a curb, elevation, or other barrier between the street and the walkway.
- Detectable warnings?

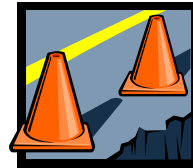
When Curb Ramps ARE required - Alterations

- Curb Ramps are required if resurfacing involves work on a street or roadway spanning from one intersection to another, and includes overlays of additional material to the road surface, with or without milling.
 - *Basically, if you're adding or replacing asphalt.*



When Curb Ramps are NOT Required - Maintenance

- Treatments that serve solely to seal and protect the road surface, improve friction, and control splash and spray are considered to be maintenance because they do not significantly affect the public's access to or usability of the road.
 - *Basically, if you're just protecting the asphalt surface and not adding asphalt material.*



Prior to DOJ/DOT Agreement...

MAINTENANCE

USDOJ

*Patching
Potholes*

USDOT

*"Non-structural"
resurfacing*

ALTERATION

USDOJ

*Everything
Else*

USDOT

*"Structural"
resurfacing*

After DOJ/DOT Agreement...

MAINTENANCE

<p>Chip Seals</p> <p>Crack Filling & Sealing</p> <p>Diamond Grinding</p> <p>Joint repairs</p>	<p><i>plus</i></p> <p>Fog Seals</p> <p>Joint Crack Seals</p> <p>Spot High-Friction Treatments</p> <p>Dowel Bar Retrofit</p>	<p>Scrub Seals</p> <p>Slurry Seals</p> <p>Pavement Patching</p>
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ALTERATION

Addition of New Layer of Asphalt

Cape Seals

Hot In-Pl

Micro

Surface Course

S-R

Caution: In some cases, the combination of several maintenance treatments occurring at or near the same time may qualify as an alteration and would trigger the obligation to provide curb ramps.

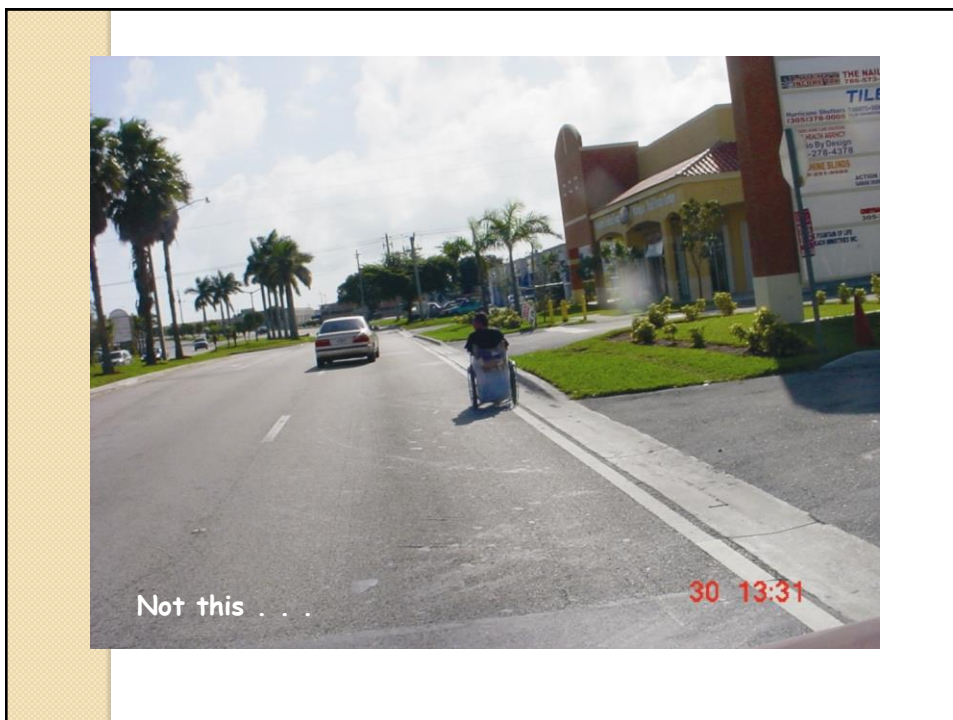
Please Note:

- This TA ***does not*** describe new requirements from DOJ or DOT.
- This TA ***does not*** change Florida DOT policy.
- ***This is a clarification of current requirements.***



Random Images

- Some good
- Some not so good







This (sorta) works



Maintenance please!!!







Close... DW needs to be full width



Very Good!





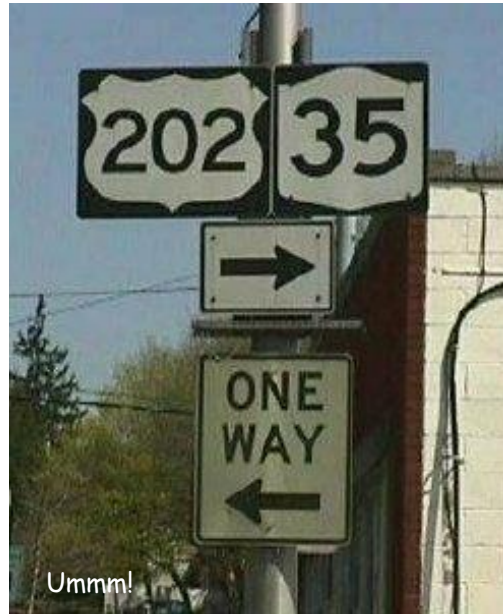
Creative path around large tree
up and over the roots

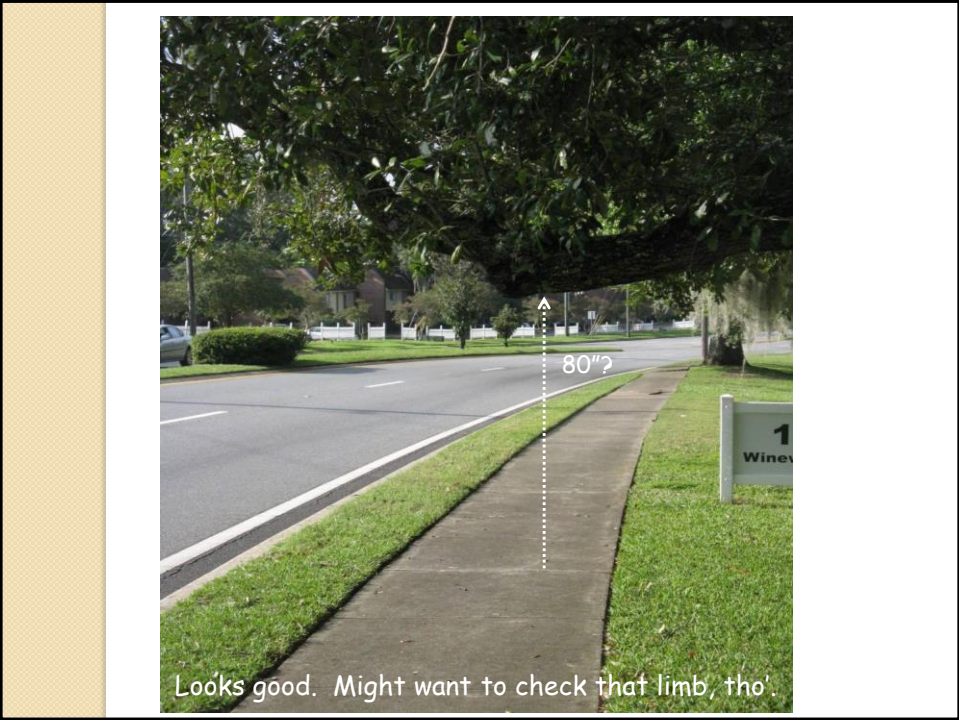


Combination return curb and flared side



Full Width ... Good!







Very Good!



This CAN be fixed.





Summary

💡 **ADA Title II - Public Services**

- Public services must be accessible
- Public sidewalks are public services
- Public sidewalks are pedestrian access routes
- Curb ramps are part of pedestrian access route
- Features along sidewalks and curb ramps must be accessible

Help is available



- Local
 - **YOUR** ADA Coordinator(s)
- State:
 - FDOT District ADA Coordinator
 - FDOT C.O. ADA Coordinator
- Federal:
 - U.S. Access Board
 - U.S. Department of Justice
 - U.S. DOT

Resources



U.S. Access Board

- Accessibility Guidelines - ADAAG
- www.access-board.gov



U.S. Dept. of Justice - ADA

- Accessibility Standards for Facilities & Sites
- www.ada.gov



U.S. Dept. of Transportation - FHWA

- Accessibility Guidance & Standards for Public Rights of Way
- www.dot.gov/citizen_services/disability/disability.html



Florida Dept. of Transportation - FDOT

- ADA information on Website
- <http://www.dot.state.fl.us/projectmanagementoffice/ADA/>

Contact us...

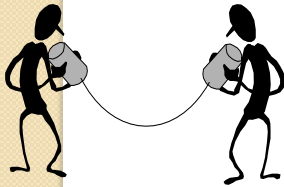
Dean Perkins, Architect
ADA Coordinator

850-414-4359

dean.perkins@dot.state.fl.us

or

Your ADA Coordinator(s)



Thank You!

Merci! Todah Rabbah

Arigato!

Dhanya Vaad!

Xie Xie!

Gracias!

Shokran!

Danke!

Live long and prosper!





What WERE they thinking!?!